

IN THE ABSTRACT

Kindly replace the abstract by the following new abstract:

--A method and apparatus for terrain mapping and/or obstacle detection for aircraft, including (a) transmitting a non-scanning beam that illuminates the terrain and/or obstacles; (b) receiving a Doppler shifted signal that is Doppler frequency shifted by an amount dependent on an angle between a line of flight of the aircraft and scatterers that reflect the transmitted beam; (c) determining the angle from the Doppler frequency; (d) determining the range of at least some of said scatterers; and (e) determining the azimuth and elevation of the scatterers.--